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REMARKS

Claims 1-16 and 21-25 are pending in the application.

Claims 1, 6, 9, 12-16, and 21-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Izumi (U.S. Patent US 6,466,348 B1) in view of Admitted Prior Art (page 15, lines 15-18, hereinafter "APA") and further in view of Sato (U.S. Patent US 5,491,686, hereinafter "Sato").

Claims 2-5, 7-8, and 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Izumi in view of APA and Sato and further in view of Darcie (U.S. Patent US 4,701,904, hereinafter "Darcie").

Each of the various rejections is overcome by various amendments and/or arguments that are presented.

Any amendments to any claim for reasons other than as expressly recited herein as being for the purpose of distinguishing such claim from known prior art are not being made with an intent to change in any way the literal scope of such claims or the range of equivalents for such claims. They are being made simply to present language that is better in conformance with the form requirements of Title 35 of the United States Code or is simply clearer and easier to understand than the originally presented language. Any amendments to any claim expressly made in order to distinguish such claim from known prior art are being made only with an intent to change the literal scope of such claim in the most minimal way, i.e., to just avoid the prior art in a way that leaves the claim novel and not obvious in view of the cited prior art, and no equivalent of any subject matter remaining in the claim is intended to be surrendered.

Also, since a dependent claim inherently includes the recitations of the claim or chain of claims from which it depends, it is submitted that the scope and content of any dependent claims that have been herein rewritten in independent form is exactly the same as the scope and content of those claims prior to having been rewritten in independent form. That is, although by convention such rewritten claims are labeled herein as having been "amended," it is submitted that only the format, and not the content, of these claims has been changed. This is true whether a dependent claim has been rewritten to expressly include the limitations of those claims on which it formerly depended or whether an independent claim has been rewriting to include the limitations of claims that previously depended from it. Thus, by such rewriting no equivalent of

any subject matter of the original dependent claim is intended to be surrendered. If the Examiner is of a different view, he is respectfully requested to so indicate.

REJECTIONS

35 U.S.C. §103

Claims 1, 6, 9, 12-16, and 21-25

Claims 1, 6, 9, 12-16, and 21-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Izumi in view of APA and further in view of Sato.

Claims 12 and 14-16 have been amended to correct minor inadvertent errors. No new matter is added as a result of these amendments.

Applicants disagree with the Office Action's characterization of Izumi's Fig. 21 and "combination of elements 325, 315, 360, and 340, and related elements" as teaching the first optical block in Applicants' claims 1 and 9. In particular, the Office Action fails to identify which specific elements in Izumi's Fig. 21 correspond to the six devices in Applicants' first optical block.

Izumi's apparatus is designed to address a problem of signal errors arising from power fluctuations in a WDM system. Izumi teaches an automatic level control scheme in which information relating to the transmission powers of a preceding optical amplifier stage and the present stage are used in adjusting automatic gain control for the present stage.

At a given amplifier stage shown in Fig. 21, information regarding the transmission power of a preceding amplifier stage is provided in a control signal to monitor and control signal circuit 315. This information, along with information relating to the transmission powers before and after the present amplifier stage, is used by an automatic gain control circuit 320 to adjust the gain of amplifier 308. The monitor and control signal transmitting and receiving circuit 315 receives a control signal containing information relating to the transmission power of the preceding stage, and provides another control signal with information about the transmission power of the current amplifier stage for transmission to a downstream stage.

Even though Izumi's Fig. 21 shows components such as an optical demultiplexer 325, add/drop module 360 and optical multiplexer 340, which are common optical components that are also used in Applicants' invention, Izumi's components are arranged differently compared to those in Applicants' claims 1 and 9 because Izumi's components are used for a different purpose.

Furthermore, Izumi does not teach or suggest at least the following features in Applicants' claims 1 or 9, such as "a first device for converting a first upstream optical signal at a first frequency into a first electrical signal, and a second device for demodulating from the first electrical signal a first information modulated on the first optical signal, a third device for modulating on a second electrical signal second information, a fourth device for converting the second information modulated on the second electrical signal into a second optical signal at the first frequency, a fifth device for providing a third optical signal at a second frequency, the third optical signal having third information modulated on it, a sixth device for multiplexing the second and third optical signals and placing the multiplexed second and third optical signals on the network as upstream optical signal."

For example, in Fig. 21 and col. 18, line 9 to col. 19, line 44, Izumi teaches WD325 that demultiplexes, from an optical signal on transmission line 301, a control signal at a monitoring wavelength λs, and provides this control signal at λs to a monitoring and controlling signal transmitting and receiving circuit 315. From this optical control signal, circuit 315 obtains information regarding the transmission power of a preceding stage and provides the information to AGC circuit 320. Circuit 315 also receives information from monitor 352 regarding the transmission power of the present stage, and provides this control information as an optical signal to multiplexer 340 for transmission to a subsequent stage.

However, there is no teaching in Fig. 21 or related discussions in col. 18, line 9 to col. 19, line 44, as to what devices may be present in circuit 315. Specifically, there is no teaching regarding an optical block that includes a first device for converting an optical signal at a first frequency to a first electrical signal, a second device that demodulates from this first electrical signal information that is carried on the first optical signal, a third device for modulating on a second electrical signal second information, and a fourth device for converting the second electrical signal into a second optical signal at the first frequency.

Thus, Applicants submit that Izumi does not teach or suggest features relating to at least the first and second devices in Applicants' claims 1 and 9.

Sato was cited by the Office Action for disclosing the feature of selecting a signal path having better signal quality, which was used in combination with Izumi and portions of Applicants' specification (admitted prior art, APA), as teaching another feature of claims 1 and 9, specifically, relating to a control device.

Since there is no indication in the Office Action that either Sato or other APA teaches or suggests at least the first and second devices as arranged in Applicants claims 1 and 9, the combination of Izumi and Sato does not render claims 1 or 9 obvious.

Thus, Izumi, APA and Sato singly or in combination, fail to teach or suggest Applicants' invention as a whole.

Since all of the dependent claims that depend from the currently amended independent claims include all the limitations of the respective independent claim from which they ultimately depend, each such dependent claim is also allowable over Izumi, APA and Sato.

Therefore, claims 1, 6, 9, 12-16 and 21-25 are allowable over Izumi, APA and Sato under 35 U.S.C. §103. As such, the rejection should be withdrawn.

Claims 2-5, 7-8 and 10-11

Claims 2-5, 7-8, and 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Izumi in view of APA and Sato and further in view of Darcie.

Each ground of rejection applies only to dependent claims, and each is predicated on the validity of the rejection under 35 U.S.C. 103 given Izumi in view of APA and further in view of Sato. Since the rejection under 35 U.S.C. 103 given Izumi in view of APA and further in view of Sato has been overcome, as described hereinabove, and there is no argument put forth by the Office Action that Darcie supplies that which is missing from Izumi in view of APA and further in view of Sato to render the amended independent claims obvious, these grounds of rejection cannot be maintained.

Even if one were to assume that Darcie's optical receiver and transmitter in Fig. 6 and Fig. 3 are analogous to one or more of Applicants' first, second, third and fourth devices, there is no indication in the Office Action that Darcie teaches or suggests the specific combinations of devices as arranged in the first and second optical blocks of independent claims 1 or 9.

Therefore, claims 2-5, 7-8 and 10-11 are allowable under 35 U.S.C. §103. As such, the rejection should be withdrawn.

CONCLUSION

It is respectfully submitted that the Office Action's rejections have been overcome and that this application is now in condition for allowance. Reconsideration and allowance are, therefore, respectfully solicited.

If, however, the Examiner still believes that there are unresolved issues, the Examiner is invited to call Eamon Wall at (732) 530-9404 so that arrangements may be made to discuss and resolve any such issues.

Respectfully submitted,

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